

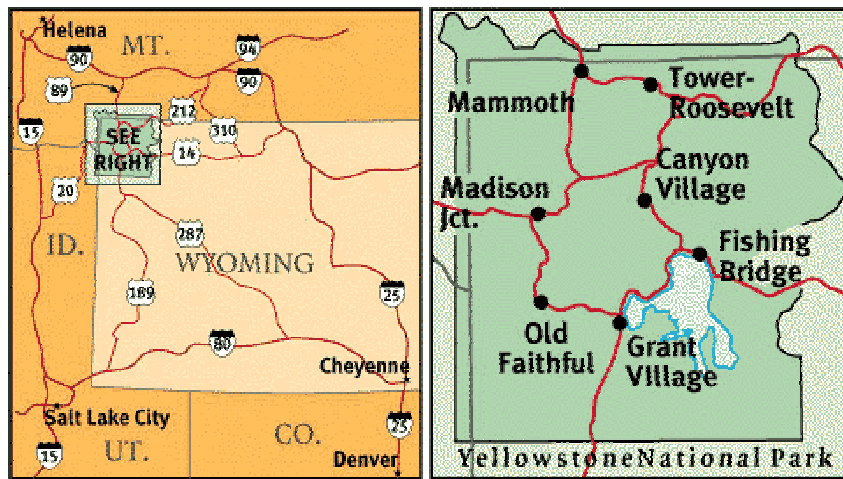
Report

Yellowstone National Park

■ 1.0 Site Description

Yellowstone National Park is located in the northwestern corner of Wyoming, approximately 60 miles west of the town of Cody, Wyoming and 65 miles north of Jackson, Wyoming. Small portions of the Park overlap into southern Montana and eastern Idaho. Other nearby cities include Livingston, Montana (57 miles north), Bozeman, Montana (82 miles north), Billings, Montana (139 miles northeast), and Idaho Falls, Idaho (111 miles southwest). See Figure 1 below.

Figure 1. Yellowstone National Park Vicinity



Yellowstone National Park was established in 1872 as the first national park created in the world. There are over 3,400 square miles (2.2 million acres) within park boundaries that include forests, meadows, and water (lakes and streams). Over 99 percent of the park is undeveloped and offers ideal habitat to over 58 animal and 290 bird species.

Yellowstone National Park is home to some of the world's most famous natural scenes, including Old Faithful geyser, Grand Canyon of the Yellowstone, Yellowstone Falls, and Yellowstone Lake. There are more geothermal phenomena (geysers and hot springs) in the Park than in the rest of the world combined.

Key physical characteristics of the park, related to transportation, are as follows:

- There are five primary entrances to Yellowstone: 1) U.S. 89/287 on the south; 2) U.S. 20/14 on the east; 3) U.S. 212 on the northeast; 4) U.S. 89 on the northwest; and 5) U.S. 20/287 on the west. A sixth entrance, Bechler, provides access to trailheads in the southwest corner of the park.
- There are 370 miles of paved roads in Yellowstone National Park, many of them narrow and in poor condition.
- Primary attractions for summer visitors are located along the two loop roads of the Park. These roads become congested during the peak months, particularly when traffic slows or stops to view wildlife such as bison, bear, elk or moose along the road.
- Most roads in the park are closed to wheeled traffic in the winter.
- Over 10,000 vehicles enter Yellowstone on summer days. Annually, over one million vehicles pass through Yellowstone.
- Motorized boats are allowed on two of the large lakes in the interior of the park, Yellowstone Lake and Lewis Lake, while non-motorized boats are allowed on these and some of the park's smaller lakes. The park's rivers are generally closed to boating.
- While no general public transportation is provided within the park, concessionaires provide bus tours in the summer and snow coach tours in the winter. A snow coach can typically carry about 10-12 people. Some 51 snow coaches now operate within the park, transporting tourists and park employees. Thirty-four snow coaches are owned by the park and operated by private concessionaires, while 17 are privately-owned.
- Bicycle paths are generally not available adjacent to park roads; however in the road improvement program for the park, four-foot paved shoulders are included in many reconstructed roads. A limited number of separate routes are provided for non-motorized travel. Some park roads are open for non-motorized access in the spring after snow plowing is completed and before the roads are open to wheeled vehicles.

Each year, Yellowstone National Park attracts over three million visitors, two-thirds of whom arrive between June and August.

Seventy-five percent of the traffic is of the pass-through variety. Visitors enter through different stations when entering and leaving the Park and the average visit is two days.

Stewardship goals for transportation include the following (*State of the Park 1999*):

- Provide safe, reliable, convenient, and environmentally sensitive transportation systems for staff and visitors as alternatives to using private vehicles for travel within the park;

- Provide safe, reliable, and environmentally efficient means of transportation for employees to do their jobs; and
- Provide adequate facilities and trained personnel to maintain all modes of employee transportation, including over-snow vehicles, boats, and stock.

■ 2.0 Existing ATS

No public ATS services are currently provided in terms of either access to or transportation within Yellowstone National Park. Proposals and studies have looked at various concepts for ATS since 1973, but no large-scale summer program has been implemented. A concessionaire provides a local area shuttle in some developed areas as a courtesy to guests staying in campgrounds or lodging.

The park and its employees coordinate a ride-share program. Employee riders pay a fee that covers the cost of gas and maintenance. Participating employees also reimburse the volunteer drivers. This program is experimenting with the use of bio-diesel-fueled vehicles (*State of the Park 1999*).

The park is also using alternative fuels (bio-diesel and E-85) in other maintenance and administrative vehicles in the park's operation. Compressed natural gas will probably be available in the summer of 2001 in West Yellowstone and facilitate its use as an additional fuel for park use.

Employees use a variety of transportation modes depending upon their role at the park. Rangers, resource specialists, and trail crews use motorized and non-motorized boats, mules, and horses. In the winter, the primary mode of transportation for employees is over-snow vehicles, including snowmobiles, snow cats, and snow coaches.

■ 3.0 ATS Needs

In 1991, former Wyoming Senator Malcolm Wallop suggested that Yellowstone should consider above ground tramways such as those at Disneyland. Congress subsequently requested Yellowstone National Park, among others, to study Alternative Transportation Systems (ATS) that could reduce private vehicle travel and emissions while allowing visitors to continue current use patterns.

Ideas proposed for Yellowstone, as presented in the *Alternative Transportation Modes Feasibility Study, Volume III* (1994), included mandatory or voluntary park-wide transportation systems; a shuttle system connecting park entrance stations to activity centers; a shuttle system around Grand Loop; and circulation systems within popular activity areas. More recent studies have evaluated options for limiting road width and vehicle size on Dunraven Pass road and the possibilities of "intelligent transportation systems" such as

computerized road signs or kiosks that would provide real-time information on road conditions and crowding at park attractions or facilities (*State of the Park 1999*).

The park is working with the Western Transportation Institute at Montana State University to study and implement pilot projects in a rural “intelligent transportation system” program in the greater Yellowstone area. The park is also participating in the Greater Yellowstone-Teton Clean Cities Coalition, which is looking at energy for transportation and buildings in the parks and communities around the parks to help the area achieve Energy Policy Act and Clean Air Act requirements. The Clean Cities concept is to integrate the energy systems so that fleet managers and the public can have consistent and reliable alternative fuels available through the region. As part of the Clean Cities effort, Yellowstone is cooperating with the Idaho National Engineering and Environmental Laboratory to look at integrated solutions to transportation and energy for communities, businesses, and public lands in the Greater Yellowstone Area.

In the town of Jackson, a score of community and area agencies, including the NPS, are planning for replacement of an existing facility at the north edge of town. This 29-acre site is referred to as the Multi-Agency Campus or MAC. This effort would tie in to the objectives of the new Jackson/Teton County Transportation Plan by providing a transportation hub at the north end of Jackson. It would provide a place where visitors and community members could park their cars and access public transit for Jackson, Teton County, and/or up to Grand Teton and/or Yellowstone National Park. The south half of Yellowstone (including Old Faithful) is within Teton County Wyoming, making extension of a county bus service more administratively feasible. ATS access would be desirable from gateway communities to the park.

Despite these studies and the interest in developing ATS, park officials believe that a park-wide mandatory system, particularly in summertime, is not currently feasible. However, a voluntary, park-wide system using a variety of incentives could attract people from their private automobiles. Also, localized ATS could prove viable in high-congestion areas. In 2001, a transportation/circulation study for Old Faithful will begin. Park officials are concerned by the often chaotic and visually displeasing traffic and pedestrian flow around the famous geyser. They believe that improving signage, relocating the parking area some distance from Old Faithful, and providing shuttle service between the two locations would help alleviate congestion and restore the beauty of the site. A similar shuttle service might prove well-suited to the Canyon Village area. There, automobile traffic is also a growing concern, as visitors try to make their way along the features of the North and South Canyon Rim Drives.

In the coming years, the need for ATS in the wintertime may grow. The park has banned all private snowmobile use by the winter of 2003-2004, citing noise and air pollution and stress on wildlife. Some 55,000 snowmobiles enter Yellowstone each winter through the west entrance, where carbon monoxide levels become so high that park employees have reported becoming ill. As snowmobiles are phased out, park officials expect at least 150 and possibly as many as 300 additional snow coaches will be needed. Incorporating the latest technologies, the new snow coaches will be cleaner than both the two-stroke snowmobiles and the present generation of snow coaches. Some may be purchased by the Park and operated by concessionaires, while others may be privately-owned and operated. They will carry passengers as well as freight from mid December through early March.

■ 4.0 Basis of ATS Needs

Yellowstone's size, its five entrance stations, and the pass-through nature of much of its visitation make a mandatory park-wide alternative transportation system relatively impractical. However, there may be a need for localized shuttle service in high-congestion areas, a possible park-wide voluntary system, and for the continuation of the direction to expand winter ATS in the form of enhanced snow coach services.

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■ 6.0 Persons Interviewed

Doug Madsen, Outdoor Recreation Officer, Planning Office, Yellowstone National Park, January 16, 2001.